CLAIMS

We claim:

1. A method for controlling the rate of release of a biologically active protein comprising the step of adding the protein to a completely biodegradable blend of about 95 to 5% by weight of a homopolymer of ε-caprolactone and about 5 to about 95% by weight of a crystallization modifier selected from the group consisting of crystalline fatty acids and crystalline esters of fatty acids which are saturated C_{12}-C_{18} fatty acid esters of polyhydric alcohols.

2. The method of claim 1 wherein the crystallization modifier is crystalline esters or fatty acids which are saturated C_{12}-C_{18} fatty acid esters of polyhydric alcohols.

3. The method of claim 2 wherein the polyhydric alcohols are selected from the group consisting of glycerol, ethylene glycol and propylene glycol.

4. The method of claim 3 wherein the polyhydric alcohol is glycerol monostearate.

5. The method of claim 1 wherein the protein is selected from the group consisting of enzyme, peptide and antibody.

6. The method of claim 1 further comprising lyophilizing a solution containing the protein before adding the protein to the blend.

7. The method of claim 1 wherein the protein is added in the amount ranging from about 1% to about 60 % by weight of the blend.

8. The method of claim 7 wherein the protein is added in the amount ranging from about 10% to about 40% by weight of the blend.

9. A method for controlling the rate of release of a biologically active protein comprising the step of adding the protein to a completely biodegradable blend of about 95 to 5% by weight of a copolymer of at least 80% by weight ε-caprolactone and corresponding remainder weight of another absorbable monomer; and about 5 to about 95% by weight of a crystallization modifier selected from the group consisting of crystalline fatty acids and crystalline esters of fatty acids which are saturated C_{12}-C_{18} fatty acid esters of polyhydric alcohols.

10. A completely biodegradable preparation providing extended release of a biologically active protein comprising an effective amount of the protein in a blend of about 95 to 5% by weight of a homopolymer of ε-caprolactone and about 5 to about 95% by weight of a crystallization modifier selected from the group consisting of crystalline fatty acids and crystalline esters of fatty acids which are saturated C_{12}-C_{18} fatty acid esters of polyhydric alcohols.

11. The preparation of claim 10 wherein the protein is an enzyme.

12. The preparation of claim 11 wherein the enzyme is alkaline phosphatase.

13. The preparation of claim 10 wherein the protein is a peptide.

14. The preparation of claim 13 wherein the peptide is leuprolide acetate.

15. The preparation of claim 10 wherein the protein is an antibody.

16. The preparation of claim 15 wherein the antibody is anti-EM.

17. The preparation of claim 10 wherein the crystallization modifier is crystalline esters of fatty acids which are saturated C_{12}-C_{18} fatty acid esters of polyhydric alcohols.

18. The preparation of claim 17 wherein the polyhydric alcohols are selected from the group consisting of glycerol, ethylene glycol and propylene glycol.

19. The preparation of claim 18 wherein the polyhydric alcohol is glycerol monostearate.

20. The preparation of claim 10 wherein the homopolymer of ε-caprolactone is present in the amount ranging from about 70% to about 30% by weight of the blend and the crystallization modifier is present in the amount ranging from about 30% to about 70% by weight of the blend.

21. The preparation of claim 20 wherein the homopolymer of ε-caprolactone and the crystallization modifier are each about 50% by weight of the blend.

22. A completely biodegradable preparation providing extended release of a biologically active protein comprising an effective amount of the protein in a blend of about 95 to 5% by weight of a copolymer of at least 80% by weight of -caprolactone and corresponding remainder weight of another absorbable monomer; and about 5 to about 95% by weight of a crystallization modifier selected from the group consisting of crystalline fatty acids and crystalline esters of fatty acids which are saturated C_{12}-C_{18} fatty acid esters of polyhydric alcohols.